

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>P26, 229A PCT</b>	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. <b>PCT/US2004/010861</b>	International filing date (day/month/year) <b>08/04/2004</b>	(Earliest) Priority Date (day/month/year) <b>09/04/2003</b>
Applicant  <b>KULICKE &amp; SOFFA INVESTMENTS INC.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

**4. With regard to the title,**

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

**ELECTRICAL INTERCONNECT STRUCTURES FOR INTEGRATED CIRCUITS AND METHOD OF MANUFACTURING THE SAME**

**5. With regard to the abstract,**

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

**6. With regards to the drawings,**

a. the figure of the **drawings** to be published with the abstract is Figure No. 3

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

national Application No  
PCT/US2004/010861

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01L23/485 H01L21/60 H01L21/607 H01L21/603

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/01478 A (RAMM JUERGEN ; BALZERS HOCHVAKUUM (LI)) 4 January 2001 (2001-01-04)	1-3, 10-12, 24-26, 38
Y	page 3, line 13 - page 6, line 27; claims 9, 19	6-9, 13-17, 20, 22, 23, 27-31, 34, 36, 37
E	& US 2004/087150 A1 (RAMM JURGEN) 6 May 2004 (2004-05-06)  the whole document	1-3, 10-12, 24-26, 38

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

2 November 2004

Date of mailing of the international search report

09/11/2004

Name and mailing address of the ISA

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## INTERNATIONAL SEARCH REPORT

national Application No

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## C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2002/155702 A1 (TANIKUNI TAKAMASA ET AL) 24 October 2002 (2002-10-24)  paragraph '0005! paragraph '0061!  -----	6-9, 16, 23, 30, 36, 37
A	US 2002/168845 A1 (MURDESHWAR NIKHIL ET AL) 14 November 2002 (2002-11-14) the whole document  -----	1-38
A	NOGUCHI J ET AL: "EFFECT OF NH3-PLASMA TREATMENT AND CMP MODIFICATION ON TDDb IMPROVEMENT IN U METALLIZATION" IEEE TRANSACTIONS ON ELECTRON DEVICES, IEEE INC. NEW YORK, US, vol. 48, no. 7, July 2001 (2001-07), pages 1340-1345, XP001086790 ISSN: 0018-9383	5, 6, 30, 36
Y	the whole document     -----	6-9, 16, 17, 20, 22, 23, 30, 31, 34, 36, 37
Y	MARUYAMA T, MORISHITA T: ""COPPER NITRIDE THIN FILMS PREPARED BY RADIO FREQUENCY REACTIVE SPUTTERING" J. APPL. PHYS., vol. 78, no. 6, 15 September 1995 (1995-09-15), pages 4104-4107, XP001203514 the whole document  -----	13-15, 27-29

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/010861

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0101478	A	04-01-2001	AU 5057600 A	31-01-2001
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			US 2002054955 A1	09-05-2002